

SF-83 SUPPORTING STATEMENT
ENVIRONMENTAL PROTECTION AGENCY
STANDARDS OF PERFORMANCE
NSPS SUBPART GGG
EQUIPMENT LEAKS OF VOC IN PETROLEUM REFINERIES

1. Identification of the Information Collection

1(a) Title of the Information Collection

ICR for NSPS Subpart GGG - Equipment Leaks of VOC in Petroleum Refineries

1(b) Short Characterization/Abstract

The New Source Performance Standards (NSPS) for Equipment Leaks of VOC (Volatile Organic Compound) in Petroleum Refineries were proposed on January 4, 1983 and promulgated on May 30, 1984. These standards apply to the following facilities in petroleum refineries: compressors and the group of all equipment (e.g., valves, pumps, flanges, etc.) within a process unit in VOC service, commencing construction, modification or reconstruction after the date of proposal. This information is being collected to assure compliance with 40 CFR Part 60 Subpart GGG.

Owners or operators of the affected facilities described must make one-time-only notifications. Owners or operators are also required to maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility, or any period during which the monitoring system is inoperative. Monitoring requirements specific to Equipment Leaks of VOC in Petroleum Refineries provide information on which components are leaking VOCs. NSPS GGG references the compliance requirements of NSPS VV. Owners or operators are required to periodically (time period varies depending on equipment type and leak history) record information identifying leaking equipment, repair methods used to stop the leaks and dates of repair. Semiannual reports are required to measure compliance with the standards of NSPS Subpart VV as referenced by NSPS Subpart GGG. These notifications, reports, and records are essential in determining compliance; and are required, in general, of all sources subject to NSPS. Any owner or operator subject to the provisions of this part shall maintain a file of these measurements, and retain the file for at least two years following the date of such measurements, maintenance reports, and records.

The Environmental Protection Agencies databases show that approximately 45 sources are currently subject to the standard, and it is estimated that an additional 3 sources per year will become subject to the standard in the next three years. There have been no new refineries built during the period of these regulations, and the increase is expected to come solely from sources that meet the definition of reconstruction or modification. The labor hours are 6,137 per year and the annual cost of this ICR will be \$340,021. All reports are sent to the delegated State or Local authority. In the event

that there is no such delegated authority, the reports are sent directly to the EPA Regional Office.

2. Need for and Use of the Collection

2(a) Need/Authority for the Collection

The EPA is charged under Section 111 of the Clean Air Act, as amended, to establish standards of performance for new stationary sources that reflect:

. . . application of the best technological system of continuous emissions reduction which (taking into consideration the cost of achieving such emissions reduction, or any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated [Section 111(a)(1)].

The Agency refers to this charge as selecting the best demonstrated technology (BDT). Section 111 also requires that the Administrator review and, if appropriate, revise such standards every four years. In addition, Section 114(a) States that the Administrator may require any owner or operator subject to any requirement of this Act to:

(A) establish and maintain such records, (B) make such reports, (C) install, use, and maintain such monitoring equipment and use such audit procedures, or methods; (D) sample such emissions (in accordance with such methods at such locations, at such intervals, during such periods, and in such manner as the Administrator shall prescribe); (E) keep records on control equipment parameters, production variables or other indirect data when direct monitoring of emissions is impractical; (F) submit compliance certifications in accordance with Section 114(a)(3); and (G) provide such other information as the Administrator may reasonably require.

In the Administrator's judgment, VOC emissions from Equipment Leaks of VOC in Petroleum Refineries cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare. Therefore, NSPS were promulgated for this source category at 40 CFR Part 60, Subpart GGG.

2(b) PRACTICAL UTILITY/USERS OF THE DATA

The control of emissions of VOC from equipment leaks of VOC in petroleum refineries requires not only the installation of properly designed equipment, but also the operation and maintenance of that equipment. Emissions of VOC from equipment leaks in petroleum refineries are the result of operation of the compressors and the group of all equipment (e.g., valves, pumps, flanges, etc.) within a process unit in VOC service. These standards rely on the prevention of VOC emissions by the work practice of proper leak detection and timely repair. The notifications required in these standards

are used to inform the Agency or delegated authority when a source becomes subject to these standards. The reviewing authority may then inspect the source to check if the leaks are being detected and repaired and the standard is being met. Performance test reports are needed as these are the Agency's record of a source's initial capability to comply with the emission standard, and serve as a record of the operating conditions under which compliance was achieved. NSPS Subpart GGG references NSPS Subpart VV for compliance. Monthly monitoring of compressors and equipment in VOC service under NSPS Subpart GGG shall take place as specified in NSPS Subpart VV section 60.485(b). For valves, if no leaks are detected for two successive months, monitoring may be performed once per quarter (see §60.482-7(c)). If a leak is detected, the equipment shall be monitored monthly until a leak is not detected for two successive months. Also, leak location shall be recorded in a log, and this information shall be kept available for two years. Leaks shall be repaired within 15 days and the date of successful repair shall be recorded in the log. Additionally, an owner or operator may use specified equipment eliminating the need for monitoring, or seek approval of alternative emission limitations under other various sections of 40 CFR Subpart VV. Semiannual reports shall be submitted itemizing the information for each month. Notifications are used to inform the Agency, or delegated authority when a source becomes subject to a standard. The reviewing authority may then inspect the source to check if the standard is being met. The semiannual reports are used for problem identification, as a check on source operations and maintenance, and for compliance determinations. The information generated by the monitoring, recordkeeping and reporting requirements described in this ICR is used by the Agency to ensure that facilities affected by the NSPS continue to identify and repair leaking equipment and achieve compliance with the regulation. Adequate monitoring, recordkeeping, and reporting is necessary to ensure compliance with these standards, as required by the Clean Air Act. The information collected from recordkeeping and reporting requirements is also used for targeting inspections, and is of sufficient quality to be used as evidence in court.

3. Nonduplication, Consultations, and Other Collection Criteria

The recordkeeping and reporting requested is required under 40 CFR Part 60, Subpart GGG.

3(a) Nonduplication

If the subject standards have not been delegated, the information is sent to the appropriate EPA Regional Office. Otherwise, the information is sent directly to the delegated State or local agency. If a State or local agency has adopted their own similar standards to implement the Federal standards, a copy of the report submitted to the State or local agency can be sent to the Administrator in lieu of the report required by the Federal standards. Therefore, no duplication exists.

3(b) Public Notice Required Prior to ICR Submission to OMB

An announcement of a public comment period for the renewal of this ICR was published in the

Federal Register on January 30, 2002. No comments were received on the burden published in the Federal Register.

3(c) Consultations

The National Petroleum Refiners Association and the American Petroleum Institute were consulted regarding industry growth rate, current number of facilities and the number of new affected facilities over the next three years. They relayed that the assumptions and information presented in this ICR seem appropriate.

3(d) Effects of Less Frequent Collection

Less frequent information collection would decrease the margin of assurance that facilities are continuing to meet the required standards. Requirements for information gathering and recordkeeping are useful techniques to ensure that good operation and maintenance practices are applied and emission limitations are met. If the information required by these standards was collected less frequently, the likelihood of detecting poor operation and maintenance of control equipment and noncompliance would decrease.

3(e) General Guidelines

None of the reporting or recordkeeping requirements contained in 40 CFR Part 60 Subpart GGG or otherwise pertinent to this request violate any of the regulations established by OMB in 5 CFR 1320.6.

3(f) Confidentiality

The required information consists of emissions data and other information that have been determined not to be private. However, any information submitted to the Agency for which a claim of confidentiality is made will be safeguarded according to the Agency policies set forth in Title 40, Chapter 1, Part 2, Subpart B - Confidentiality of Business Information (see 40 CFR 2; 41 FR 36902, September 1, 1976; amended by 43 FR 40000, September 8, 1978; 43 FR 42251, September 20, 1978; 44 FR 17674, March 23, 1979).

3(g) Sensitive Questions

None of the reporting or recordkeeping requirements contained in 40 CFR Part 60, Subpart GGG or otherwise pertinent to this request contain sensitive questions.

4. The Respondents and the Information Requested

4(a) Respondents/SIC Codes

The respondents of the recordkeeping and reporting requirements are petroleum refineries where the affected compressors or group of equipment within a process unit commenced construction, modification, or reconstruction after January 4, 1983. The SIC code for the respondents affected by the standards is SIC (U.S. Standard Industrial Classification) Code 2911 which corresponds to the NAICS (North American Industry Classification System) 324110 for petroleum refineries where the affected compressors or group of equipment within a process unit commenced construction, modification, or reconstruction after January 4, 1983.

4(b) INFORMATION REQUESTED

(i) Data Items

All data in this ICR that is recorded and/or reported is required by 40 CFR Part 60, Subpart GGG. Although monitoring of the various components may be required on a weekly, monthly, quarterly, semi annual or annual basis, given the number of components that must be monitored at any facility, monitoring overall is essentially occurring daily. Therefore, it is assumed that the average record keeping time for each day's worth of monitoring is 0.3 hours and that monitoring is done 365 days a year.

A source must make the following reports:

Notifications for 40 CFR Part 60, Subpart GGG	Citation
Construction/reconstruction	60.7(a)(1)
Anticipated startup	60.7(a)(2)
Actual startup	60.7(a)(3)
Physical or operational change	60.7(a)(4)
Initial performance test	60.8(d)
Alternative standard selected	60.487(d)
Reports for 40 CFR Part 60, Subpart GGG	
Initial performance test results	60.8(a)
Comply with the provisions of 60.487	60.592(e)
Semiannual reports	60.486, 60.487(a), 60.487(b), 60.487(c)

Performance test	60.8, 60.487(e)
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A source must keep the following records.

Recordkeeping for 40 CFR Part 60, Subpart GGG	Citation
Startups, shutdowns, malfunctions	60.7(b)
All measurements, monitoring device, and performance testing measurements	60.7(e)
Comply with the provisions of 60.486	60.592(e)
Each detected leak shall be recorded in a log and kept for 2 years	60.486(c)
Information pertaining to design requirements or closed vent systems and control devices	60.486(d)
Information pertaining to all equipment	60.486(e)
Information pertaining to all valves	60.486(f)
Information pertaining to valves complying with alternative compliance requirements	60.486(g)
Design criteria and any changes	60.486(h)
Records for use in determining exemptions	60.486(i)
Information and data to demonstrate that a piece of equipment is not in VOC service	60.486(j)

Records are required to be retained for 2 years.

ii. Respondent Activities

Respondent Activities
Read instructions
Perform initial performance test as per 40 CFR 60.485, Reference Method 21 and 22 tests, and repeat performance tests
Write the notifications and reports listed above

Enter information required to be recorded above
Submit the required reports developing, acquiring, installing, and utilizing technology and systems for the purpose of collecting, validating, and verifying information
Develop, acquire, install, and utilize technology and systems for the purpose of processing and maintaining information
Develop, acquire, install, and utilize technology and systems for the purpose of disclosing and providing information
Adjust the existing ways to comply with any previously applicable instructions and requirements
Train personnel to be able to respond to a collection of information
Transmit or otherwise disclose the information

As refiners replace/upgrade their monitoring equipment, they may choose to use systems that automatically log the results of monitoring, which can then be downloaded into a computer database. This database can then be used to develop the required reports.

5. The Information Collected -- Agency Activities, Collection Methodology, and Information Management

5(a) Agency Activities

EPA conducts the following activities in connection with the acquisition, analysis, storage, and distribution of the information required under 40 CFR Subpart GGG:

Agency Activities
Observe initial performance tests and repeat performance tests if necessary
Review notifications and reports, including performance test reports, and other reports, required to be submitted by industry
Audit facility records
Input, analyze, and maintain data in the Aerometric Information Retrieval System (AIRS) database

5(b) Collection Methodology and Management

Following notification of startup, the reviewing authority might inspect the source to determine whether the pollution control devices are properly installed and operated. Performance test reports are used by the Agency to discern a source's initial capability to comply with the emission standard. Data and records maintained by the respondents are tabulated and published for use in compliance and

enforcement programs. The semiannual reports are used for problem identification, as a check on source operation and maintenance, and for compliance determinations.

Information contained in the reports is entered into AIRS which is operated and maintained by EPA's Office of Air Quality Planning and Standards. AIRS is EPA's database for the collection, maintenance, and retrieval of compliance and annual emission inventory data for over 100,000 industrial and government-owned facilities. EPA uses AIRS for tracking air pollution compliance and enforcement by Local and State regulatory agencies, and EPA Regional Offices and Headquarters. EPA and its delegated Authorities can edit, store, retrieve and analyze the data. The records required by this regulation must be retained by the owner or operator for two years.

5(c) Small Entity Flexibility

For this industry there is a distribution of business sizes. The recordkeeping and reporting requirements were selected within the context of this specific subpart and the specific process equipment and pollutant. A majority of the affected facilities are large businesses. However, the impact on small businesses was taken into consideration during development of the regulation. Due to technical considerations involving the process operations and leak detection and repair programs, the recordkeeping and reporting requirements are the same for both small and large businesses. The Agency considers these requirements to be the minimum needed to ensure compliance and, therefore, cannot reduce them further for small businesses. To the extent that larger businesses can use economies of scale to reduce their burden, the overall burden will be reduced.

For sources that install "leakless" components, monitoring may not be required for those components. Monitoring (therefore, recordkeeping) may also be reduced for sources that maintain low percentages of leaking components. Additionally, alternative means of emission limitation are allowed after proper demonstration of their effectiveness to the Administrator.

5(d) Collection Schedule

The specific frequency for each information collection activity within this request is shown in Table 2: Annual burden of reporting and recordkeeping requirements as a result of NSPS Subpart GGG.

6. Estimating the Burden and Cost of the Collection

Table 2 documents the computation of individual burdens for the recordkeeping and reporting requirements applicable to the industry for the Subpart included in this ICR. The individual burdens are expressed under standardized headings believed to be consistent with the concept of burden under the Paperwork Reduction Act. Where appropriate, specific tasks and major assumptions have been identified. The type of industry costs associated with the information collection activity in the standards are labor costs for using the VOC monitors. Monitoring equipment for leaks is standard in the industry for safety reasons. To the extent possible, the requirements of this standard are consistent with industry practice. Consequently, there are no capital costs associated with this standard. Responses to this

information collection are mandatory. The Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

6(a) Estimating Respondent Burden

The average annual burden to industry over the next three years from these recordkeeping and reporting requirements is estimated at 6,137 person-hours. These hours are based on Agency studies and background documents from the development of the standards or test methods, Agency knowledge and experience with the NSPS program, the previously approved ICR, and any comments received.

6(b) Estimating Respondent Costs

(i) Estimating Labor Costs

This ICR uses labor rates of \$55.34 per hour for technical (most activities) and \$78.54 per hour for managerial (assumed needed only for performance tests). These rates are from the United States Department of Commerce Bureau of Labor Statistics, March 2000, "Table 10. Private industry, by occupational and industry group." The rates are from column 1, "Total compensation." The wage rates have been increased by 110% to account for the benefit packages available to those employed by private industry.

(ii) Estimating Capital and Operations and Maintenance Costs

The only type of industry costs associated with the information collection activity in the standards are labor costs. There are no capital/startup, or operation and maintenance costs. The type of industry costs associated with the information collection activity in the standards are labor costs and maintenance costs for the VOC monitors. Monitoring equipment for leaks is standard in the industry for safety reasons. To the extent possible, the requirements of this standard are consistent with industry practice. Consequently, there are no capital costs associated with this standard.

(iii) Capital/Start-up vs. Operating and Maintenance (O&M) Costs

This is not applicable since this is a leak detection and repair program with no continuous monitoring equipment as stated in the previous section.

6(c) Estimating Agency Burden and Cost

The only costs to the Agency are those costs associated with analysis of the reported information. Publication and distribution of the information are part of the AFS program. Examination of records to be maintained by the respondents will occur as part of the periodic inspection of sources, which is part of EPA's overall compliance and enforcement program.

The average annual Agency cost during the 3 years of the ICR is estimated to be \$20,060 (from table 1). This cost is based on the average hourly labor rate at a GS12 step 1 times a 1.6 benefits multiplication factor to account for government overhead expenses for a total of \$36.98. Details upon which this estimate is based appear in Table 1: Average annual EPA resource requirements resulting from NSPS Subpart GGG.

6(d) Estimating the Respondent Universe and Total Burden and Costs

Respondent Universe:

Regulation Citation	(A) No. of New Source/Year	(B) No. of Initial Reports for New Sources	(C) No. of Existing Sources	(D) No. of Reports for Existing Sources	(E) Total Annual Responses (AxB)+(CxD)
40 CFR Part 60, Subpart GGG	3	4	45	2	102

The number of total respondents is 48. This number is the sum of Column A and Column C of the Respondent Universe table above. This represents the number of existing sources plus the number of new sources averaged over the three-year period. It is shown in block 13(a), Number of respondents, on the OMB 83-I form.

The number of Total Annual Responses is 102. This is the number in column E of the Respondent Universe table. It is shown in block 13(b), Total annual responses, on the OMB 83-I form. The total annual labor costs are \$340,021. This number is not shown on the OMB 83-I form on block 13(c), Total hours requested. Only the burden hours are reflected in block 13(c). Details upon which this estimate is based appear in Table 2. Annual burden of reporting and recordkeeping requirements as a result of NSPS Subpart GGG.

The total annual capital and O&M costs to the regulated entity are zero dollars. This number is shown on the OMB 83-I form in block 14 (c), Total annualized cost requested. Capital and O&M costs are not applicable since this is a leak detection and repair program with no continuous monitoring equipment used.

6(e) Bottom Line Burden Hours And Cost Tables

The bottom line burden hours and cost table for both the Agency and the respondents appear below (Table 1 and Table 2).

6(f) Reasons for Change in Burden

The increase in burden cost from the most recently approved ICR is due to a change in calculated labor rates.

6(g) Burden Statement

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460-0001; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Officer for EPA. Include the EPA ICR number and OMB control number in any correspondence.

Part B of the Supporting Statement

This part is not applicable because no statistical methods were used in collecting this information.

TABLE 1: AVERAGE ANNUAL EPA RESOURCE REQUIREMENTS RESULTING FROM NSPS SUBPART GGG.

Activity	(A) EPA Hours/Occurrence	(B) Occurrences/Plant/Y ear	(C) a EPA Hours/Plant Year	(D) Plants/Year	(E) b EPA Hours/Year
Initial Performance Tests (New Plants)	24	1	24	3	72
Repeat Performance Tests c (New Plants)	24	0.2	4.8	3	14.4
Report Review					
(New Plants)	2	1	2	3	6
Notification of construction					
Notification of anticipated startup	0.5	1	0.5	3	1.5
Notification of actual startup	0.5	1	0.5	3	1.5
Notification of initial test	0.5	1.2	0.6	3	1.8
Review test results	8	1.2	9.6	3	28.8
(Existing Plants)	4	2	8	51	408
Emission Reports					
Total Annual Hours					534

Travel Expenses:

(1 person x 3 plants/year x 3 days/plant x \$50 per diem) = (\$250 round trip/plant x 3 plants/year) = \$1200/year

Salary: d

(510 hours/year x \$36.98/hour) = \$18,860/year

Total Annual Cost = \$1,200 x \$18,860 = \$20,060

a $A \times B = C$

b $C \times D = E$

c Assume 20% of initial performance tests must be repeated due to failure

d Estimate an hourly wage of GS 12 Step 1 multiplied by a 1.6 benefits multiplication factor to account for government overhead expenses for a total of \$36.98

TABLE 2: ANNUAL BURDEN OF REPORTING AND RECORDING REQUIREMENTS AS A RESULT OF NSPS SUBPART GGG a

	Hours per Occurrence	Occurrences/Respondent/Year	Hours/Respondent /Year © = A x B)	Respondents/Year	Hours/Year (E = C x D)	Cost/Year
1. APPLICATIONS (Not Applicable)						
2. SURVEY AND STUDIES (Not Applicable)						
3. REPORT REQUIREMENTS						
A. <u>Read Instructions</u>	1	1	1	3	3	166 c
B. <u>Required Activities</u>						
Initial performance test	24	1	24	3	72	4,319 b
Repeat performance test	24	1	24	0.6 d	14	840 b
C. <u>Create Information</u> (Included in 3B)						
D. <u>Gather Existing Information</u> (Included in 3E)						
E. <u>Write Report</u>						
Notification of construction or reconstruction	2	1	2	3	6	332 c
Notification of anticipated startup	2	1	2	3	6	332 c
Notification of actual startup	2	1	2	3	6	332 c

	Hours per Occurrence	Occurrences/Respondent/Year	Hours/Respondent /Year © = A x B)	Respondents/Year	Hours/Year (E = C x D)	Cost/Year
Notification of initial performance test	2	1	2	3	6	332 c
Report of performance test (Included in 3B)						
Semiannual work practice reports	8	2	16	48 e	768	42,501 c
4. RECORDKEEPING REQUIREMENTS						
A. <u>Read Instructions</u> (Included in 3A)						
B. <u>Plan Activities</u> (Included in 3B)						
C. <u>Implement Activities</u> (Included in 3B)						
D. <u>Develop Record System</u> (Not Applicable)						
E. <u>Time to Enter Information</u>						
Records of operating parameters g	0.3	365 f	109.5	48 e	5,256	290,867 c
F. <u>Train Personnel</u> (Not Applicable)						
G. <u>Audits</u> (Not Applicable)						
5. TOTAL ANNUAL BURDEN					6,137	\$340,021

- a. Estimating that there are approximately 9 plants (respondents) which become subject over a 3-year period. The number of new sources per year equals $9/3 = 3$.
- b. Assume an average hourly wage of $(\$55.34 \times 0.8E + \$78.54 \times 0.2E)$. This amount was multiplied by the hours per year in Column E.
- c. Assume 100% technical rate at \$55.34/hour.
- d. Assume 20% of initial performance tests must repeat due to failure.
- e. Assume operation is 365 days per year as specified in the NSPS review document.
- f. Assume that the average number of new affected facilities to be constructed or reconstructed over the next 3 years $(45 + 9/3 = 48)$
- g. Although monitoring of the various components may be required on a weekly, monthly, quarterly, semi-annual or annual basis, given the number of components that must be monitored at any facility, monitoring overall is essentially occurring daily. Therefore, it is assumed that the average record keeping time for each day's worth of monitoring is 0.3 hours and that monitoring is done 365 days per year.